Division of Public Health

Delaware's Public Health Laboratory and Sentinel Laboratories' Partnership

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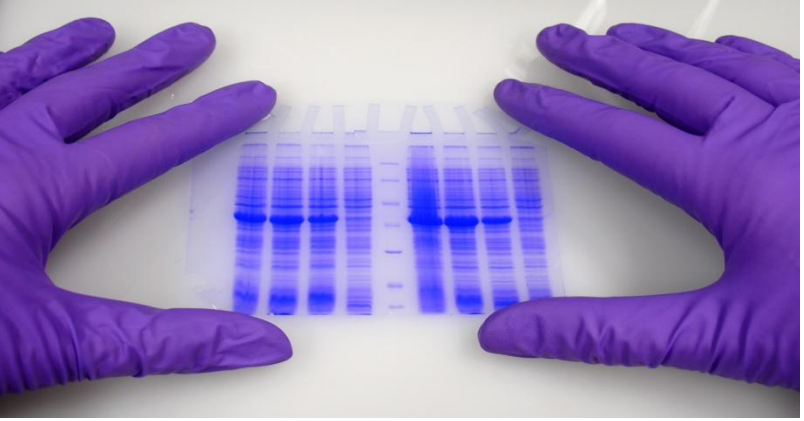
Lab Preparedness

- CDC/ LRN Preparedness Grant 2001
- Public Health Labs – Increase capacity to confirm BT agents/molecular tests
- Sentinel Lab – need Rule/Out training
- Packaging & Shipping infectious agents
- Laboratory Preparedness Advisory Committee (LPAC)



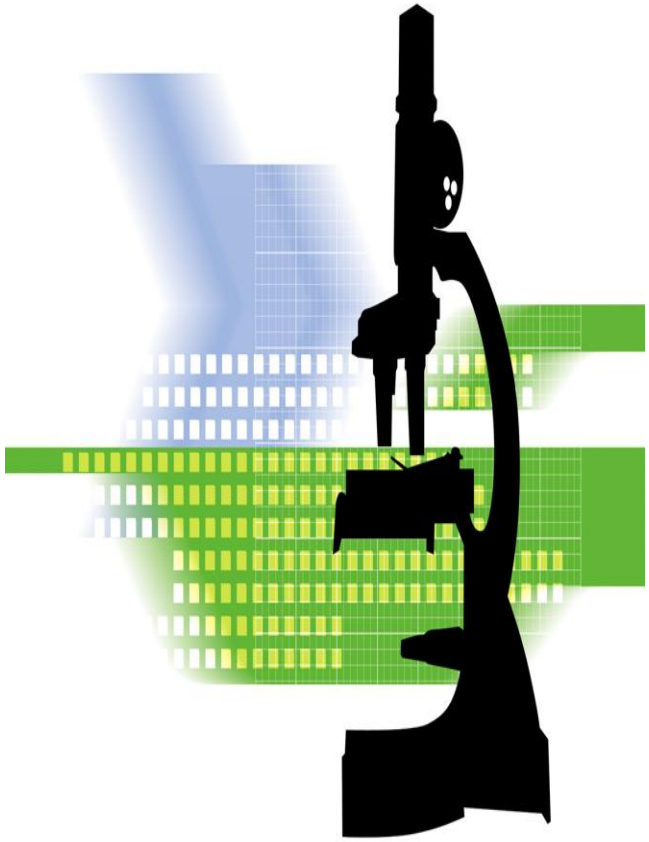
Proficiency testing

- A means to test sentinel labs on their ability to rule/out BT agents
- Most PHL's are not in PT business
- CAP (College of American Pathologists) already sends PTs to most labs
- LPS survey was not testing appropriate organisms or stains. Answer choices not applicable
- APHL interceded to assist in getting CAP to work with PHL staff on revising format.

LPX CAP Survey

- CAP & PHL workgroup revised survey
- List of surrogate organisms
- List of appropriate responses
- Contact LRN reference lab for r/o testing
- Packaging & shipping exercise

DE CAP LPX-A April 2011



- LPX-01(*non-BT culture*)
- 10 reporting labs- 9 sentinel, 1 reference
  - 10 labs: non-BT culture
  - Gram negative rod, normal growth at 24 hrs for a gnr, growth on SBA, CHOC and MAC, oxidase pos, indole pos, urea neg, growth at 42°, arginine neg
  -

Delaware Results

- LPX-02 (Bacillus anthracis)
  - 1 lab DPHL: confirmed Bacillus anthracis
  - 9 labs: unable to rule out Bacillus anthracis using ASM Sentinel Laboratory Guidelines:
    - non-motile (motility/TTC)
    - non-hemolytic
    - catalase positive
    - large gram positive rods

Delaware Results

- LPX-03 (Francisella tularensis)
  - 1 lab DPHL: confirmed Francisella tularensis
  - 9 labs: unable to rule out Francisella tularensis using ASM Sentinel Laboratory Guidelines:
    - oxidase negative
    - urea negative
    - catalase- slightly positive
    - beta-lactamase positive
    - slow-growing, extremely tiny faintly staining gncb

Acceptable Responses and Contact

- Reported for LPX-A 2011
  - LPX-01 DE: 100% reported non-BT culture
  - LPX-02 DE: 100% reported unable to rule out Bacillus anthracis
  - LPX-03 DE: 100% reported unable to rule out Francisella tularensis
- Contact with DPHL
  - 2011 LPX-A: 100% DE sentinel labs
  - 2010: LPX-A and LPX-B: 100% DE sentinel labs
  - 2009: LPX-B: 78% of DE sentinel labs

Packaging & Shipping

- All labs contacted DPHL by the due date of the survey.
- All labs received on-site training in the fall of 2010; therefore, no labs were required to package and ship at this time.
- All labs will be required to package and ship for the LPX-B survey in the fall of 2011.

Agents of Bioterrorism: Annual Sentinel Lab Update

- 2002: First Agents of Bioterrorism Workshop was held in 2002
- Updates continued yearly until!!!!
- 2006: Train-the-trainer NLTN course available which included hands-on training
- 2007,2008 and 2010: training available which included the popular “wet workshop”

Full Day Training includes:

- Review of Sentinel Laboratory Guidelines for Suspected Agents of Bioterrorism (ASM, CDC and APHL)
- DPHL protocols and forms
- Safety training
- “Wet Workshop” in afternoon using vaccine strain or attenuated bioterrorism organisms. Each BT organism, along with two other organisms that closely mimic a BT organism are plated on a variety of agars and plates are available to read at 24, 48 and 72 hours of incubation.

Conclusions

- BT workshop training is necessary at least every other year due to high turnover in sentinel laboratories

- Best way to learn is through a combination of wet workshops, review of Sentinel Laboratory Guidelines for Suspected Agents of Bioterrorism and participation in the CAP LPX surveys

Conclusions

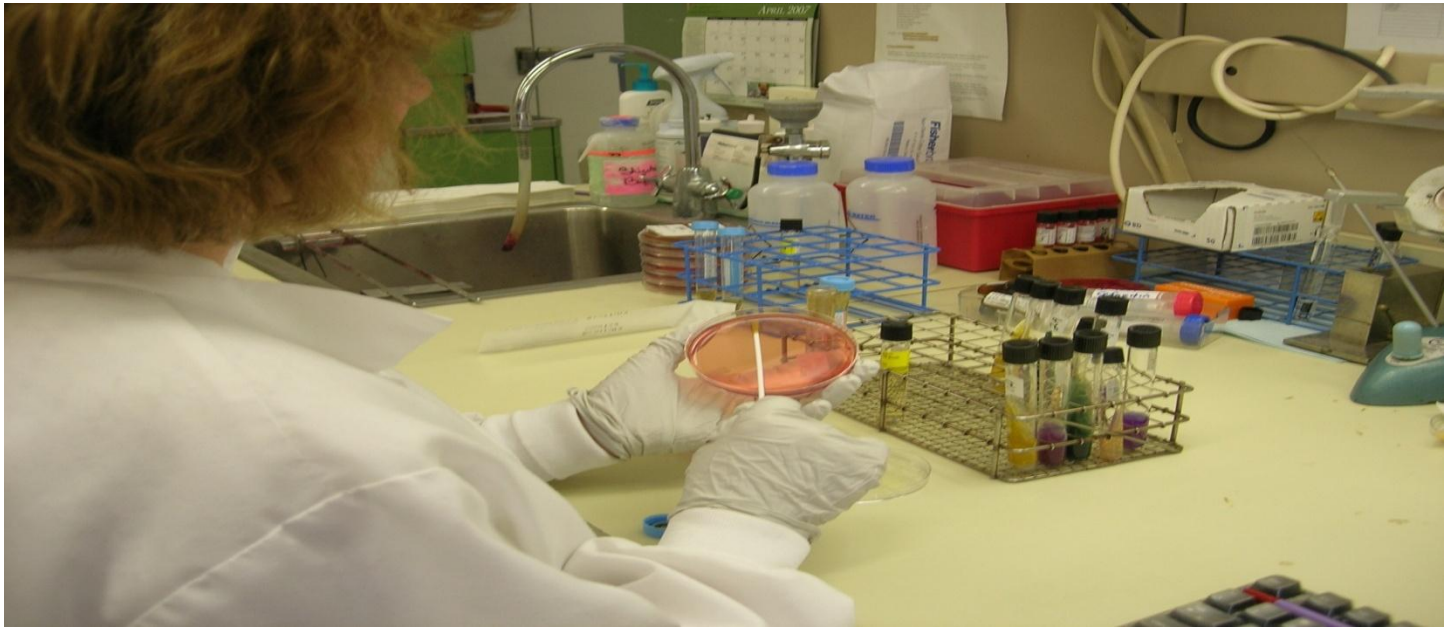
- BSL2/3 training given during the workshop can reduce the risk of an acquired laboratory infection when working with organisms transmitted by aerosols

- Packaging & shipping training is necessary for several reasons:

  1. Sentinel laboratories must be able to properly package an isolate for rule out of a BT agent. This is for the safety of the courier and the laboratory personnel at both laboratories.

  2. In case of a public health emergency, the sentinel laboratory may be requested by CDC or DPHL to send cultures/specimens, etc. directly to CDC.

Questions?



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